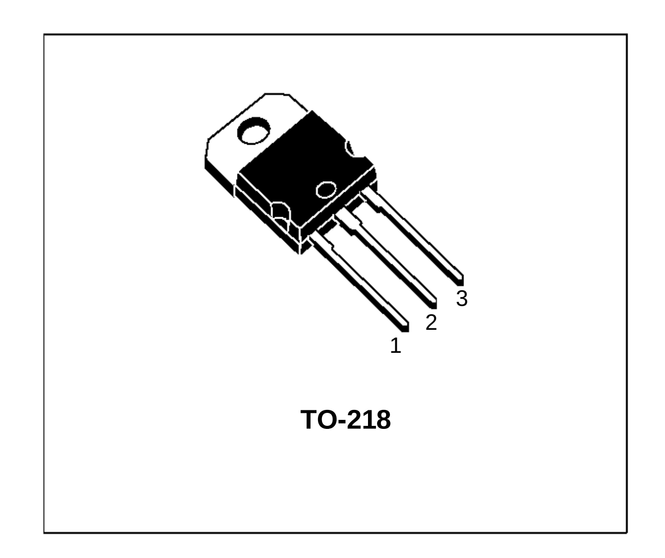
TIP2955
TIP3055

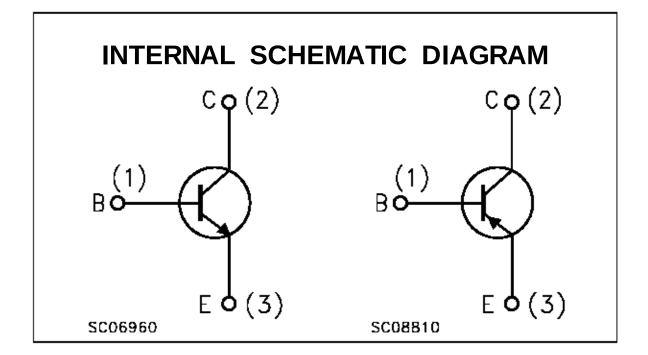
COMPLEMENTARY SILICON POWER TRANSISTORS

- SGS-THOMSON PREFERRED SALESTYPES

DESCRIPTION
The TIP3055 is a silicon epitaxial-base planar NPN transistor mountend in TO-218 plastic package and intented for power switching circuits, series and shunt regulators, output stages and hi-fi amplifiers.
The complementary PNP type is the TIP2955.



TO-218



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage (I_E = 0)	100	V
V_{CEO}	Collector-emitter Voltage (I_B = 0)	60	V
I_C	Collector Current	15	A
I_B	Base Current	7	A
P_{tot}	Total Dissipation at $T_c \leq 25\ ^oC$	90	W
T_{stg}	Storage Temperature	-65 to 150	^oC
T_j	Max. Operating Junction Temperature	150	^oC

THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case Max	1.4	°C/W

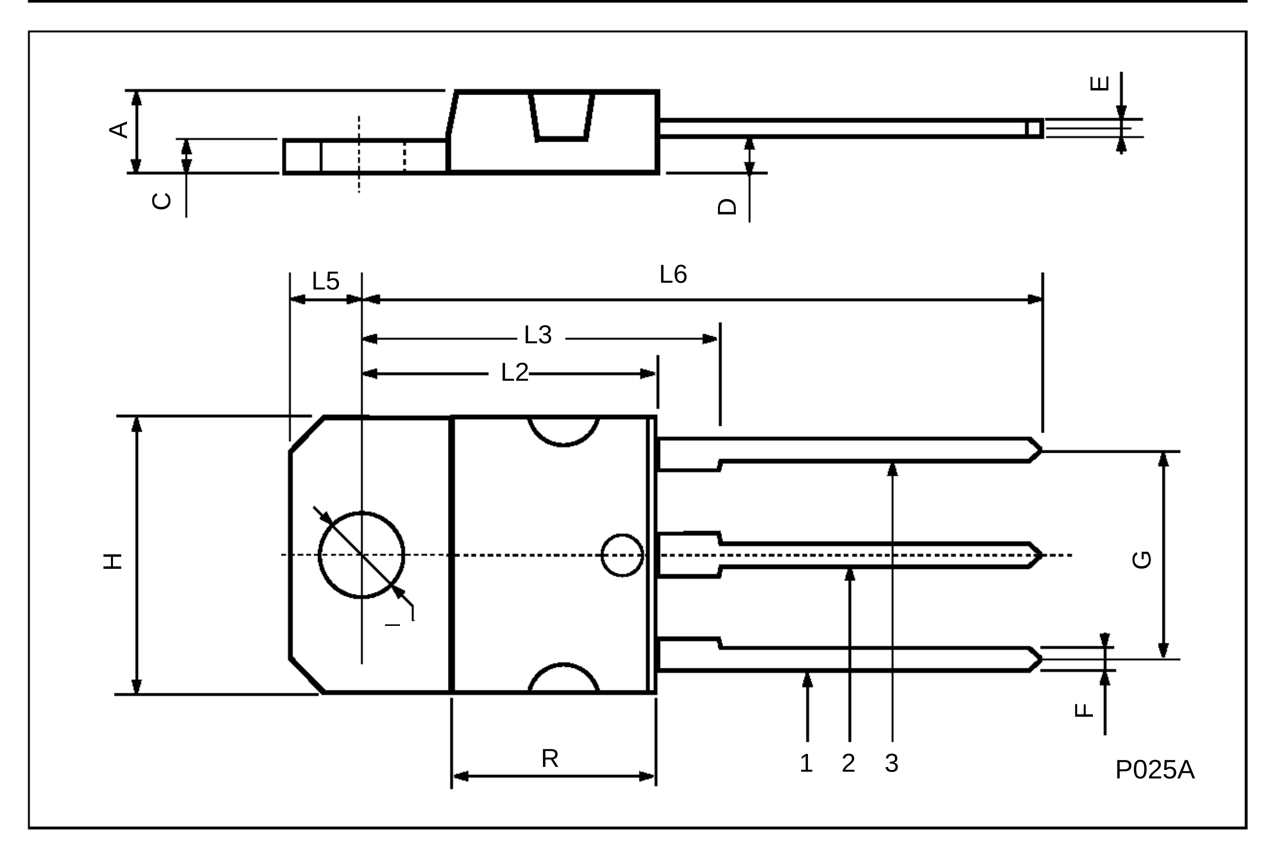
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CEX}	Collector Cut-off Current (V_{BE} = 1.5V)	V_{CE} = 100 V V_{BE} = -1.5 V			5	mA
I_{CEO}	Collector Cut-off Current (I_B = 0)	V_{CE} = 30 V			0.7	mA
I_{EBO}	Emitter Cut-off Current (I_C = 0)	V_{EB} = 7 V			5	mA
$V_{CEO(sus)}$*	Collector-Emitter Sustaining Voltage (I_B = 0)	I_C = 30 mA	60			V
$V_{CE(sat)}$*	Collector-emitter Saturation Voltage	I_C = 4 A I_B = 0.4 A I_C = 10 A I_B = 3.3 A			1 3	V V
V_{BE}*	Base-emitter Voltage	I_C = 4 A V_{CE} = 4 V			1.8	V
h_{FE}*	DC Current Gain	I_C = 4 A V_{CE} = 4 V I_C = 10 A V_{CE} = 4 V	20 5			
h_{fe}	Small Signal Current Gain	I_C = 1 A V_{CE} = 10 V f = 1 KHz	15			
f_T	Transition-Frequency	I_C = 0.5 A V_{CE} = 10 V f = 1 MHz	3			MHz
t_{on} t_{off}	RESISTIVE LOAD Turn-on Time Turn-of Time	IC = 6 A I_{B1} = 0.6 A I_{B2} = - 0.6 A V_{BEoff} = - 4 V R_L = 5 Ω		0.5 0.9		μs μs

∗ Pulsed: Pulse duration = 300 μs, duty cycle 1.5 %

TO-218 (SOT-93) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.7		4.9	0.185		0.193
C	1.17		1.37	0.046		0.054
D		2.5			0.098	
E	0.5		0.78	0.019		0.030
F	1.1		1.3	0.043		0.051
G	10.8		11.1	0.425		0.437
H	14.7		15.2	0.578		0.598
L2	–		16.2	–		0.637
L3		18			0.708	
L5	3.95		4.15	0.155		0.163
L6		31			1.220	
R	–		12.2	–		0.480
Ø	4		4.1	0.157		0.161




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